

S P E C I F I C A T I O N

for

One 50 Horse Power Double Valve Automatic Engine to be furnished
and erected on and with its foundation at the

UNITED STATES MINT.

Philadelphia, Pa.

The contract will include furnishing the engine with foundation and belt, ready for work, from the steam outlet at the two 150 H.P. engines in engine room, to the transmission of power to the pulley on line shaft running 150 revolutions.

Bidders must furnish detailed specification and sufficient plans with figured dimensions, showing the general lay out of the engine in the space appropriated for it, as shown on drawing No. 14966, with elevation showing connection with the shaft in north passage. A full description of engine must include:

Kind of engine.

Economy; pounds of coal required per horse power per hour.

Range of horse power above that specified.

Speed of engine.

Diameter of cylinder.

Length of stroke.

Cut-off in parts of stroke.

Diameter of steam pipe.

Diameter of exhaust pipe.

Dimensions of driving pulley.

Dimensions of fly wheel.

Width of belt.

Kind of belt.

Bidders must be practical and responsible engine builders, and will be required to give satisfactory security to the full amount of the contract for the faithful performance of the work, and must give location and performance of similar engines now in operation.

GENERAL DESCRIPTION.

The engine will be set in the engine room and must not occupy a rectangle greater than 14 feet by 6 feet 6 inches, and must be of the Girder type of bed to correspond in appearance with the other engines in same room.

The engine must correspond to and be set parallel to and in line with the two 150 Horse power engines and connected by a belt sufficient to transmit the power of the engine to a pulley 40 inches in diameter on a line shaft making 150 turns per minute, running from south to north. It is necessary that carrying pulleys be provided, to raise the belt to permit passage to each gangway and valve motion of engine.

The engine must maintain a regular speed under varying loads with automatic cut-off.

All necessary valves, oil cups, fixtures and full set of spanners and wrenches must be provided. The steam pipe for engine must be furnished and erected and connected with the steam pipe outlet provided under the contract for the 150 horse power engines. The steam pipe must be neatly covered with an approved non-conducting material. Exhaust pipe nozzles must be carried clear of foundations provided with gate valve and connected with exhaust pipes

of the 150 horse power engines.

The pipes, valves, oil cups, fixtures, belt, finish, material, and workmanship of the engine must be of ^{of their} ~~their~~ best, respective kinds, and to the entire satisfaction of the Superintendent or the Mint or his authorized agent.

The foundation and fly wheel pit must be excavated and the foundation masonry built and foundation bolts provided and set .

The foundation and fly wheel bit must be built on a bed of Portland cement concrete at least 8 inches in thickness, of straight hard-burned brick laid in cement mortar and grouted, with a heavy cast iron plate extending under the engine, with oil grooves and arranged to catch droppings; said plate to be planed and fitted to the engine, making it an integral part of the construction.

Care must be taken in the construction of the foundation of the engine to preserve the stability of the building, and if the dimensions of the engine foundation are such as to require the foundations of building to be underpinned, such underpinning must be done by the contractor for the engine at his own expense.

TEST.

The engine will be tested loaded to 50 horse power, as per indicator, and the economy calculated from the data obtained from the boiler test.

Dry steam of 80 pounds pressure will be delivered at the engine from boilers, with an evaporating efficiency of 11 pounds of water per pound of combustible, burning anthracite pea coal.

It is understood that the Superintendent of the Mint shall have the right to make any alterations, additions or omissions of work or materials herein specified, or shown on the drawings, during the progress of the work, that he may find necessary, and the same shall be acceded to by the contractor and carried into effect without in any way violating or vitiating the contract. If any such changes are made, the value of the same shall be decided by the Engineers and Architects, who shall make an equitable allowance therefor, and shall add the amount of said allowance to, or deduct it from, the contract prices, according as the cost of the work has been increased or lessened.

Also, that no extra work or materials will be paid for unless ordered by the Superintendent of the Mint.

Also, that any disagreement of difference between the parties to the contract upon any matter or thing arising from these specifications, or the drawings to which they refer, or the kind or quality of the work required thereby, shall be decided by the Engineers and Architects, whose decision and interpretation of the same shall be considered final, conclusive and binding.

CARE OF FINISHED WORK.

Particular care must be taken by the contractor or his agent of the finished work, which work must be covered up and thoroughly protected from injury or defacement during its erection and completion.

REMOVAL OF RUBBISH, ETC.

All refuse material and rubbish that may accumulate during the progress of the work is to be removed from time to time, as

provided, however, that the said excavations and erection do
 be directed by the Engineers and Architects, and on the comple-
 tion of the work, the building, streets and grounds must be thor-
 oughly cleaned up and the surplus material and rubbish removed.

RISKS, BLAME, ETC.

The contractor is to assume all risks and bear any loss occa-
 sioned by neglect or accident during the progress of the work until
 the same shall have been completed and accepted by the Superinten-
 dent of the Mint. The contractor is also to assume all blame or
 loss by reason of neglect or violation of city or other ordinan-
 ces, encroachments upon neighbors, loss by fire or from any other
 cause.

The contractor is to properly protect the pavements during
 the progress of the work, and make good any injuries that may have
 occurred in consequence of the erection of this work, or during
 its progression, and must pay for all permits, inspectors' fees, or
 any other charges from city or county officers.

The Superintendent of the Mint or the Engineers and Archi-
 tects shall have full power during the progress of the work to
 reject any materials he or they may deem unsuitable for the pur-
 poses for which they are intended, or which are not in strict
 conformity with the spirit of these specifications. They shall
 also have power to cause any inferior or unsafe work to be taken
 down and altered at the cost of the contractor.

The excavation for and the erection of foundations must be
 commenced within ten days after signing the contract, and the erec-
 tion of the engine must be commenced as soon thereafter as may be
 necessary for the completion of the contract within the prescribed

SPECIFICATION

for

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- Dimensions of driving pulley.
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- Width of belt.
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ALTERATIONS.

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The contractor is to properly protect the pavements during the progress of the work, and make good any injuries that may have occurred in consequence of the erection of this work, or during its progression, and must pay for all permits, inspectors' fees, or any other charges from city or county officers.

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